

REMARKS

Status of the Claims

Claims 6-17 are pending in this application. Claims 1-5 were canceled in a previous paper. NO claims have been added. The claims have been amended to change the term "desired" to "foreign" for the gene expressed. The claims have been amended to recite that the transgenic mollusk is pearl producing. Claim 9 has been amended to further define the vector. Claims 10 and 11 have been amended to further define the foreign gene by function. Claim 14 has been amended to define the group of genes that are fused with the foreign gene. Claim 17 has been amended to define the promoter. Applicants submit that no new matter has been added by the above claim amendments.

Rejections under 35 U.S.C. § 112, first paragraph

The Examiner rejects claims 8, 9 and 11-17 as containing subject matter that is not described in the specification. Applicants traverse the rejection and respectfully request the withdrawal thereof.

Specifically, the Examiner rejects claim 11 because claim 11 is directed to a transgenic mollusk that comprises a promoter that is operably linked to a foreign gene *encoding substitutes, which relate to pigment formation*. Applicants delete the objectionable phrase and amend the claims to recite the phrase "or a promoter

operably linked to a foreign gene encoding enzymes with catalyze reactions forming pigments."

The Examiner also rejects claims 6-17 as not enabled by the specification because the claims are directed to making a transgenic mollusk, which make colored pearls. The Examiner contends that the specification does not state that the protein is secreted from the mantle of the mollusk to make the pearl. The Examiner also states that the claims are not enabled because the specification fails to teach how to make the transgenes by fusing the genes with the linker sequence. Applicants traverse the rejections and respectfully request the withdrawal thereof.

Applicants submit that the present invention is supported and enabled by the specification. Applicants submit that one of ordinary skill in the art would know how to make and use the invention of producing a colored pearl producing transgenic mollusk from the disclosure in the specification. Applicants submit that the inventors of the present invention isolated and sequenced a gene from a framework of proteins that are scaffolds for a crystal layer of pearl and are secreted from the mantle body. The inventors discovered the possibility of inserting a pigment gene into the framework protein gene to change the color of a pearl. The inventors also constructed a new plasmid for the insertion of the Green Fluorescent Protein gene into the multi-restriction site of a

commercial plasmid. This invention is adequately described in the specification. As such, this rejection should be withdrawn.

The Examiner requires that the claims be limited to pearl producing mollusks. Applicants submit that the claims have been amended to recite a pearl producing mollusk. As such, this rejection should be withdrawn.

The Examiner does not find support for the phrase "prism layer skeleton protein gene". Applicants amend the claims to delete this phrase and to insert the phrase "prism protein gene" since this phrase is supported by the specification. As such, this rejection should be withdrawn.

Rejection under 35 USC 112, second paragraph

The Examiner rejects claims 6-9 and 11-17 as indefinite. The Examiner objects to the term "desired" in claims 6-9. Applicants amend the claims to delete this term and insert the phrase "foreign gene related to color." As such, this rejection should be withdrawn.

The Examiner also rejects the claims as indefinite and confusing. Applicants amend the claims to remove any confusion. Applicants submit that the methods of claims 6-9 would result in the mollusk of claims 10-17. As such, Applicants respectfully request that the rejections be withdrawn.

Rejections under 35 U.S.C. §§ 102 and 103

The Examiner has withdrawn the all anticipatory and obviousness rejections. No prior art rejections remain.

Conclusion

Applicants further submit that recombinant adenoviruses as useful vehicles for integrating foreign genes is highly developed. However, the possibility of gene expression with adenovirus in mollusks has not yet been disclosed. Thus, the present invention is novel and nonobvious. As such, as Applicants have addressed and overcome all rejections in the Office Action, Applicants respectfully request that the rejections be withdrawn and that the claims be allowed.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Kecia Reynolds (Reg. No. 47,021) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By 
Gerald M. Murphy, Jr., #28,977

GMM/KJR/jao
0760-0294P

P.O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000